

**REMARKS**

The application has been reviewed in light of the Office Action mailed on May 7, 2004. Claims 1-13, 15 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Pain et al., U.S. Patent No. 5,886,659 (hereinafter "Pain") in view of Pickering et al., U.S. Patent No. 5,050,194 (hereinafter "Pickering") and further in view of Gabara, U.S. Patent No. 5,739,714 (hereinafter "Gabara"). Reconsideration is respectfully requested based on at least the following reasons.

Even if the three references are somehow properly combinable under the auspices of the MPEP and Federal Circuit law, and they are not as explained in detail below, the references, taken alone or in combination fail to teach every limitation of claim 1. Claim 1 specifically recites an "an image receiving portion, ... [an] image processing portion producing a current mode output and said image receiving portion receiving said current mode output."

The Office Action asserts that "Pain's disclosure of digital output 110 (figs. 1A-1C) suggests another separate portion (i.e., another chip) to be connected thereto ... . The suggested separate portion represents 'an image receiving portion ... receiving current mode output' in order to form a complete imaging system of CMOS compatible applications ... ." Office Action, page 4. This is a mischaracterization by the Office Action, and it is not supported by Pain. Pain does disclose a digital output 110 from its arrays 100, 112, and, as asserted in the Office Action, this does suggest that some type of a receiving portion receives this digital output. However, nothing in Pain teaches or suggests that the digital output 110 includes a "current mode output," or that a receiving portion on the other end of digital output 110 "receiv[es] said current mode output," as specifically recited in claim 1. The other references, Pickering and Gabara,

are not relied upon to teach this limitation and they do not teach this limitation. For at least this reason, claim 1 is allowable.

This rejection is also respectfully traversed because the proposed combination of the three references is in clear violation of the requirements set forth in the MPEP. The Office Action admits that Pain does not disclose “CMOS outputs being differential outputs and an active impedance matching device being adapted to match said output impedance of said image processing portion to said input impedance of said image receiving portion.” Office Action, page 4. For these shortcomings, the Office Action relies on Pickering and Gabara.

The Office Action asserts that because Pickering teaches differential input and output drivers 1, 8, and that “matching of the transmission line is performed to minimize problems of noise caused by reflections,” it would have been obvious to insert into Pain these teachings of Pickering. And, in the Response to Arguments section, the Office Action asserts that the “combination of Pain and Pickering has been established at least based on the motivation to minimize noises.”

The Office Action simply provides a conclusion – that there is a motivation to minimize noise – which is not based on anything that is disclosed in the references or to what the references relate. Based on this conclusion, each and every disclosure ever made relating to reduction of noise in any kind of a circuit would be properly combinable regardless of the intended use of the structures or whether or not components of different disclosures could be functionally substituted into one another. The Federal Circuit was very clear in its intent to prevent such broad conclusions when stating that “motivation to combine prior art teachings ‘must be clear and particular ... Broad conclusory statements regarding the teachings of the multiple references ... are not evidence’” of motivation. In re Dembiczak, 175 F.3d 994 (Fed. Cir. 1999).

The Office Action has not explained why Pickering's "off-chip data" transmission circuits should be substituted into Pain's "current mode imaging device." There is absolutely no suggestion or motivation in Pain to somehow add to its imaging device a differential driver from Pickering's disclosure. Further, there is no suggestion or motivation in Pain to somehow add to its imaging device the "matching of the transmission line" feature of Pickering's device. These "combinations" by the Office Action are nothing but assembling unrelated references and picking and choosing elements therefrom while using the Applicants' claims as a road map.

The already improper "combination" of Pain and Pickering is made even more improper by the proposed addition of a third reference – Gabara. The Office Action admits that Pickering fails to teach or suggest "an active impedance matching device" as recited in claim 1, and relies on Gabara for this shortcoming. The only motivation to make the additional substitution is that to "variably control (variable load) the impedance of the devices in the combination of Pain and Pickering as an obvious circuit design variation over the passive one." Office Action, page 5.

This is another improper leap by the Office Action. The Office Action points to nothing in either Pain or Pickering that would suggest a need to "variably control (variable load) the impedance of the devices." This is hindsight mixing and matching. Gabara relates to an apparatus "for controlling ground bounce." There is simply no reason why a person skilled in the art of "current mode imaging devices" (of Pain) or "high speed asynchronous data interfaces" (of Pickering) would look to a disclosure relating to an "apparatus for controlling ground bounce" (of Gabara) to "variably control load," as asserted by the Office Action. This proposed combination is improper, and in violation of the principles established in MPEP § 2143 and by the Federal Circuit.

For at least the reasons discussed above, claim 1 is allowable. Claims 2-13 depend from claim 1 and contain every limitation of claim 1. Claims 2-13 should be allowed for at least the same reasons claim 1 is allowable, and for other reasons.

Independent claim 15 recites, inter alia, an “impedance matching device being adapted to match an output impedance of said image acquisition portion to an input impedance of said image processing portion by adjusting bias current through at least one biased device in a way that renders said input impedance relatively independent of an input current.”

The Office Action again relies on the improper combination of Pain, Pickering and Gabara to meet the limitations of claim 15. As discussed above with respect to claim 1, the proposed combination of Pain and Pickering is improper, and the proposed combination of Pain, Pickering and Gabara is even more improper. For at least these reasons, claim 15 is allowable.

Moreover, the Office Action admits that the references, even if combined, fail teach or suggest “matching impedances by adjusting bias current through at least one biased device in a way the renders the input impedance relatively independent of an input current.” To account for this limitation, the Office Action takes an Official Notice that “the active impedance transistors can provide variable termination resistance (variable load) by changing bias current of the transistors.” Office Action, page 7. The Office Action then concludes that it would have obvious “to adjust bias current of the active impedance transistors so that variable impedance control between the transmitter and the receiver would be realized independent of an input current.” Office Action, page 8.

Initially Applicants request that documentary evidence be provided to support the Official Notice taken by the Office Action. Moreover, the conclusory statement that it would have been obvious "to adjust bias current of the active impedance transistors so that variable impedance control between the transmitter and the receiver would be realized independent of an input current" is unsupported by anything in the record. No teaching, suggestion or motivation is provided by the Office Action in support of its assertion. Thus, this is an improper rejection, and because the corresponding limitation of claim 15 has not been met, claim 15 is allowable. Claim 16 depends from claim 15 and should be allowed together with claim 15.

Regarding the Office Action's assertion that the "Applicant has not traversed the Examiner's assertion of Official Notice of claim 12, [and that] the lack of traversal is an admission that the current source in Pickering may be considered as a current mirror is admitted as being prior art," the Applicants disagree. The Applicants do not agree with this Official Notice. In a previous communication to the Patent Office, Applicants based their position for allowance of dependent claim 12 on the arguments presented for allowance of claim 1, from which claim 12 depends. The Applicants stated that claim 12 was allowable "for at least the reasons" for allowance of claim 1.

Applicants acknowledge with appreciation the indication that claims 14 and 17 would be allowable if rewritten in independent form. Claim 14 has been rewritten to include the limitations of base claim 1 and intervening claim 13. Claim 17 has been rewritten to incorporate the limitations of base claim 15 and intervening claim 16. Claims 14 and 17 are considered to be in immediate condition for allowance.

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In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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